

September 17, 1997

The Honorable Alvin L. Alm
Assistant Secretary for Environmental Management
Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585-0113

Dear Mr. Alm:

In Recommendation 94-1, the Defense Nuclear Facilities Safety Board (Board) cited the urgent need for the Department of Energy (DOE) to expedite its actions to remediate plutonium-bearing materials and spent nuclear fuel in the defense nuclear complex. To date, DOE has been largely successful in focusing on and moving forward with these remediation efforts. One of the key contributors to this success has been Hanford's Plutonium Finishing Plant (PFP).

Unfortunately, the focus of DOE-Richland (DOE-RL) and contractor line management on PFP stabilization efforts was permitted to override growing problems with the rigor of PFP's nuclear operations. Despite early identification of these problems by DOE-RL's PFP Facility Representatives, corrective actions have been ineffective and often impermanent. These problems became so severe that an administrative hold was placed on all PFP fissile material handling on December 31, 1996. Failure to correct these problems may have contributed to the May 14, 1997, tank explosion at PFP's Plutonium Reclamation Facility, and did in fact lead to the July 1997 determination of the DOE-RL Readiness Assessment that PFP was not ready for operations.

The Board is concerned that the continued protracted hold on PFP fissile material handling is having a deleterious effect on the reduction of plutonium residue hazards, as well as on the technical proficiency and morale of PFP staff. The Board is equally concerned that expeditious efforts to correct the primary deficiencies that preclude restart of priority activities at PFP could be delayed by protracted efforts to develop a comprehensive corrective action plan. DOE and its contractors must find the means to achieve both renewed efforts toward stabilization *and* safety. The Board's interest in expeditious efforts to resume PFP operations should not, however, be viewed as indifference to safety. The Board believes that appropriate attention to the items listed in the enclosure to this letter can be readily achieved and thus permit operations to safely proceed.

The Board is encouraged to learn that DOE-RL now plans to reconvene its independent team to conduct a full Readiness Assessment prior to the resumption of fissile material handling at PFP. Enclosed is a list of key attributes that warrant consideration when developing PFP's path forward to ensure the safe and timely restoration of high-priority fissile material operations. Deficiencies in each of these attributes as noted by the Board's staff are also described. The Board requests that DOE provide a report describing DOE line management and contractor plans

for addressing the deficiencies in each key attribute. The Board believes it is important that this report be submitted within 14 days of the receipt of this letter, as addressing the key attributes should assist DOE and its contractors in expeditiously preparing PFP for safe resumption of operations.

Sincerely,

John T. Conway
Chairman

c: The Honorable Tara O'Toole
Mr. Mark B. Whitaker, Jr.
Mr. John Wagoner

Enclosure

Enclosure

**Necessary Attributes for the Timely and Safe Restoration of
Fissile Material Handling at Hanford's Plutonium Finishing Plant (PFP)**

- 1. Clear Identification of Risks:** During DOE-RL's brief to the Board on August 13, 1997, the Board specifically asked whether there were any risks associated with the protracted hold on fissile material handling at PFP. DOE-RL and its contractors responded in the negative, but have since expressed concern over the loss of operator proficiency. Neither DOE-RL nor its contractors can make a well-informed decision unless this and other risks (e.g., plutonium residue instability) are clearly identified.
- 2. Formal Identification of Contractor Recommended Recovery Actions:** The Board understands that Babcock & Wilcox Hanford Corporation (BWHC) is pursuing a path to address those activities that are necessary before restart to facilitate the expeditious resumption of limited fissile material handling. While the Board considers this prudent, BWHC has yet to define formally which specific activities are necessary.
- 3. Formal Acceptance of Contractor Recovery Actions:** Fluor Daniel Hanford (FDH), the site integrating contractor, and DOE-RL have held numerous discussions with BWHC about their expectations for PFP resumption. While such discussions are useful, they result in the contractor's being subject to additional suggestions and expectations without the benefit of rigorous consideration and review. Formal acceptance of BWHC's recovery plan will permit all involved parties to focus on a fixed target.
- 4. Contractor Verification of Readiness:** DOE-RL line management's letter of August 13, 1997, suggests that BWHC need not conduct another Readiness Assessment to support the resumption of fissile material handling. Given BWHC's failure of the DOE-RL Readiness Assessment and its recent poor performance during an assessment by the FDH Facility Evaluation Board, this decision is questionable.
- 5. DOE-RL Verification of Contractor Readiness:** DOE-RL's August 13 letter implied that DOE-RL line management did not intend to repeat the independent Readiness Assessment. On September 4, 1997, DOE-RL reversed this position and now will repeat the assessment. DOE-RL formalized this decision in a September 5, 1997, letter to the contractor, but because of an editing error incorrectly stated its intentions relative to the scope of the DOE-RL Readiness Assessment. A formal correction remains to be issued.
- 6. DOE-RL Line Management Resolution of Safety Issues:** DOE-RL line management's inability to effect substantive corrective action resulted in large part in the extended hold on fissile material handling, the explosion at the Plutonium Reclamation Facility (PRF), and the failing of the DOE-RL Readiness Assessment. As thus evidenced and as discussed in DOE-RL's Investigation Report on the PRF explosion, DOE-RL line management of PFP appears to evidence weaknesses in its ability to understand, accept, and take lasting actions to resolve safety-related issues.

7. **Formal Criteria for Relaxing Intrusive Oversight:** Over the last 9 months, FDH and DOE-RL have felt increasingly compelled to involve themselves in PFP day-to-day operations and in the preparation for fissile material handling to compensate for BWHC staff weaknesses. While understandable, extended operation in this fashion severely detracts from FDH's and DOE-RL's independence and objectivity. No objective criteria have been established for when this compensatory measure will be removed.